

Fifth Grade Module 4: End-of-Module Assessment Task Score Sheet

A Progression of Learning

A Progression of Learning is provided to describe steps that illuminate the gradually increasing understandings that students develop *on their way to proficiency*. In this chart, this progress is presented from left to right. The learning goal for each student is to move to the last step, “Evidence of solid reasoning with a correct answer”. These steps are meant to help teachers and students identify and celebrate what the student **CAN** do now, and what they need to work on next.

Score Key: A Progression of Learning

Little or no evidence of reasoning with an incorrect answer.	Evidence of some reasoning with an incorrect answer.	Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.	Evidence of solid reasoning with a correct answer.
(1 Point)	(2 Points)	(3 Points)	(4 Points)

Module 4 End-of-Module Assessment

		Domain				Standards							
Question	Operations and Algebraic Thinking	Number and Operations in Base Ten	Number and Operations – Fractions	Measurement and Data	5.OA.2	5.NBT.7	5.NF.3	5.NF.4	5.NF.5	5.NF.6	5.NF.7	5.MD.1	5.MD.2
1			1 2 3 4					X			X		
2		1 2 3 4				X							
3	1 2 3 4				X								
4a			1 2 3				X			X			
4 b, c				1 2 3 4								X	
5			1 2 3 4							X	X		
6			1 2 3 4						X				
7 a, b				1 2 3 4								X	X
7c,d,e,f,g			1 2 3 4				X	X		X	X		

Domain Score	Operations and Algebraic Thinking		Number and Operations in Base Ten		Number and Operations – Fractions		Measurement and Data	
Total Points								
Level	4	4 pts.	4	4 pts.	4	18-19 pts.	4	7-8 pts.
	3	3 pts.	3	3 pts.	3	13-17 pts.	3	5-6 pts.
	2	2 pts.	2	2 pts.	2	8-12 pts.	2	3-4 pts.
	1	1 pt.	1	1 pt.	1	5-7 pts.	1	2 pts.

Note: For more information about standards assessed in this module, see back of this score sheet.

Notes:

Fifth Grade Module 4: End-of-Module Assessment Task Score Sheet (continued)

End-of-Module Assessment Task (Topics A–H) Standards Addressed

Write and interpret numerical expressions.

- 5.OA.2** Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.*

Perform operations with multi-digit whole numbers and with decimals to hundredths.

- 5.NBT.7** Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

- 5.NF.3** Interpret a fraction as division of the numerator by the denominator ($\frac{a}{b} = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret $\frac{3}{4}$ as the result of dividing 3 by 4, noting that $\frac{3}{4}$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $\frac{3}{4}$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?*

- 5.NF.4** Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
- Interpret the product of $(\frac{a}{b}) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. *For example, use a visual fraction model to show $(\frac{2}{3}) \times 4 = \frac{8}{3}$ and create a story context for this equation. Do the same with $(\frac{2}{3}) \times (\frac{4}{5}) = \frac{8}{15}$. (In general, $(\frac{a}{b}) \times (\frac{c}{d}) = \frac{ac}{bd}$.)*

- 5.NF.5** Interpret multiplication as scaling (resizing) by:
- Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
 - Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $\frac{a}{b} = \frac{n \times a}{n \times b}$ to the effect of multiplying $\frac{a}{b}$ by 1.

- 5.NF.6** Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

- 5.NF.7** Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. (Students capable of multiplying fractions can generally develop strategies to divide fractions by reasoning about the relationship between multiplication and division. However, division of a fraction by a fraction is not a requirement at this grade level.)
- Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for $(\frac{1}{3}) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(\frac{1}{3}) \div 4 = \frac{1}{12}$ because $(\frac{1}{12}) \times 4 = \frac{1}{3}$.*
 - Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for $4 \div (\frac{1}{5})$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (\frac{1}{5}) = 20$ because $20 \times (\frac{1}{5}) = 4$.*
 - Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share $\frac{1}{2}$ lb of chocolate equally? How many $\frac{1}{3}$ -cup servings are in 2 cups of raisins?*

Convert like measurement units within a given measurement system.

- 5.MD.1** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

Represent and interpret data.

- 5.MD.2** Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}, \frac{1}{4}, \frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*